REMARKS

Applicants have read and considered the Office Action dated June 6, 2008. Claims 1 and 2 have been amended. Claims 8-17 have been withdrawn. Claims 1-7 are currently pending. Reconsideration and reexamination are hereby requested.

Claims 1-7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Shastri. Claim 1 has been amended to limit the functionalizable polymer of the formula I to a functionalizable polymer wherein the graftable hydroxy or carboxylic groups of the non-functional R_2 chain derived from the epoxide monomer (B) are graftable by a compound selected from the group consisting of:

ligands specific to cellular receptors;

lipids;

peptides;

polyethers;

polyacrylates;

natural polymers;

polyosides;

antigens or antibodies;

salen; and

cyclodextrins.

Support for this limitation can be found at least on page 4 of the application as filed.

Moreover, the numbers 1 and 2 in the expression "wherein R1, R2" appearing in claim 2 have been rewritten as subscripts in conformity with formula (I).

The Office action contends that Shastri discloses a degradable copolymer comprising distributed units of a ring opened functionalized epoxide corresponding to the claimed B unit, and a ring opened cyclic ester, corresponding to the claimed A unit in the formula (I).

Claim 1 has been amended as mentioned hereinabove and clearly distinguishes over the cited prior art. Applicants assert that Shastri does not disclose a functionalizable polymer as recited in amended claim 1, wherein the polymer is functionalizable by the specific compounds mentioned hereinabove.

Applicants note that the present application is directed to a very specific family of functionalizable polymers of very specific formula (see claim 1 of the present application). These polymers are prepared by a very simple yet efficient process comprising two basic steps plus an optional third step, which are easy to carry out with high yields. More precisely, the process according to the present invention comprises the steps of:

a) reacting a cyclic ester or diester monomer or cyclic amide or diamide monomer A with an epoxide of formula III (see claim 8) in the presence of a catalyst;
b) subjecting the polymer obtained in step a) to an oxidation to convert the $-CH=CH_2$ group into corresponding CH_2CH_2OH groups; and
c) optionally subjecting the polymer obtained in step b) to another oxidation with a Jones mixture to convert the $-CH_2CH_2OH$ group into corresponding carboxylic groups $-CH_2COOH$.

The oxidation steps b) and/or c) of the above process can be carried out with hydrogen peroxide. However, in accordance with one particular preferred embodiment of the invention, these steps are carried out under mild oxidation conditions. For example, such oxidation can be carried out by hydroboration at low temperature.

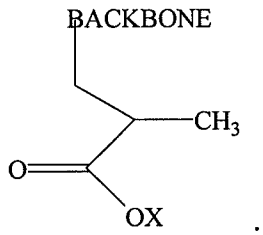
Once the $-CH=CH_2$ groups have been converted into corresponding $-CH_2CH_2OH$ groups, the polymer exhibits several grafting possibilities. The, the above-mentioned $-CH_2CH_2OH$ groups can further be oxidized into corresponding $-CH_2COOH$ groups, thereby allowing further grafting possibilities.

Shastri discloses a very broad family of polymers prepared from hydroxy acid monomers including particular cyclic ester monomers such as lactones or dioxanones (see paragraph 0096) and from monomers provided with an epoxy function (hereinafter called "epoxides").

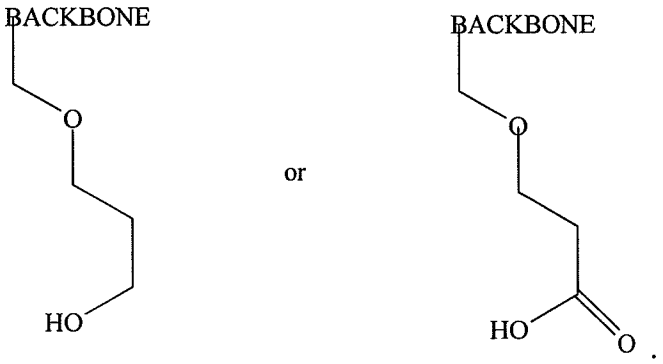
The whole description of Shastri insists on the fact that the epoxides are already functionalized. More specifically, this description and the few examples given therein make reference to epoxides that have already been functionalized before being copolymerized with cyclic esters. It is only at a few places, but without any concrete examples and/or further description, that reference is made to the fact that the epoxides could be functionalized after having been polymerized with cyclic esters (see paragraphs 0043, 0036, 0040, 0082 and 0095 and claim 27).

Moreover, the only polymers described and exemplified in Shastri have a lateral chain which is substantially different from the lateral chain in the polymers of the present invention, as shown in the following drawings.

In Shastri, the polymers have an ester function in the lateral chain:



In the present application, there is a fundamental difference as there is no ester function in the lateral chain of the polymers:



In addition to the above, the Applicants note that in Shastri a very broad reference is made to potential uses of the compounds that are prepared as disclosed therein. The main advantage in all cases is that the obtained polymers are actually "degradable" (see in particular paragraph 0037).

Amongst the potential uses of these polymers, reference is made to the preparation of particulate and/or capsules in which an active principle can be dispersed or encapsulated in order to obtain an *in vivo* controlled release (see paragraph 00121 and following). However, there is no teaching or suggestion that the obtained polymers are graftable to ligands specific to cellular receptors, lipids, peptides, polyethers, polyacrylates, natural polymers, polyosides, antigens or antibodies, salen, or cyclodextrins, as claimed amended claim 1.

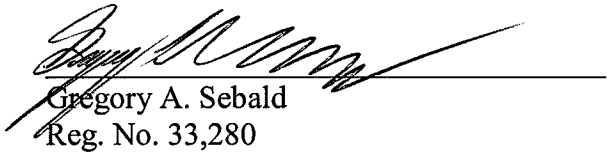
Applicants assert that the functionalizable polymers of the present invention as recited in amended claim 1 and dependent claims 2-7, are novel over Shastri and thus patentable.

If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: 10/6/08



Gregory A. Sebald
Reg. No. 33,280
GAS:PLSkaw